REMARKS

Applicants have now had an opportunity to carefully consider the Examiner's comments set forth in the Office Action of September 10, 2007.

Claims 1-13 remain in this application. Claims 8 and 12 are presently amended.

Reconsideration of the Application is requested.

The Office Action

Claims 1-13 were rejected under 35 U.S.C. 103(a) as being unpatentable over Mongeon (U.S. Patent No. 5,710,824) in view of Magee (U.S. Patent No. 5,231,504).

Applicant's Response

By way of background, for certain images, especially graphics, it is desirable to make colors more saturated so that the prints appear vivid. One approach is to apply a LUT or a set of LUTs to an incoming set of CMYK values so that the output CMYK values are increased, resulting in more saturated colors. However, these LUTs are usually applied to CMYK channels individually, causing grays to be darker. The current invention treats grays and non-gray colors differently so that non-gray colors can be made more saturated without making grays darker.

The current invention makes colors more vivid without affecting grays. It calculates the gray component in the color as well the maximum color component. The ratio of the two components indicates where the color is with reference to the gray axis. A ratio of 0 means there is no gray component and a ratio of 1 means the color is a gray. This method applies no adjustments to grays and applies full adjustments to colors with no gray components. For other colors, it applies partial adjustments depending on the value of the ratio. These color adjustments are referred to as color saturation adjustments.

In contrast, the prior art cited in the last Office Action, i.e. Mongeon and Magee, do not disclose or teach a method of color reproduction which includes gray balance adjustment and color saturation adjustment as disclosed and claimed by the Applicant.

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With regard to claim 1, the last Office Action asserts Mongeon, at col. 5, lines 36-40, discloses a method of gray balance and color saturation adjustment, where the method determines a relative amount of chroma (i.e. saturation) in the initial CMY data values. The Office Action supports this argument with the cited language of "CMY colorant signal determined through interpolation."

The Applicant respectively traverses this rejection because the interpolation method disclosed in Mongeon, at col. 5, lines 36-40, is directed to the calculation of unknown printer CMYK values by interpolating between known printer device CMYK values. This is generally referred to as mapping.

In contrast, the claimed subject matter determines a relative amount of chroma in the initial CMY data values In other words, the maximum and minimum CMY data values are determined to establish the relative range of C, M and Y. This range provides the relative chroma associated with the CMY data.

For the reasons discussed above, the Examiner is respectively requested to withdraw the rejection of independent claim 1, as Mongeon does not disclose a relative determination of chroma, as claimed, at col. 5, lines 36-40.

With regard to claims 2-4, these claims depend on independent claim 1, and the Examiner is respectively requested to withdraw the rejection of claims 2-4 for the reasons discussed with regard to claim 1.

With regard to independent claims 5, 8 and 12, and all claims which depend therefrom, i.e. dependent claims 6-7, 9-11 and 13, each of these claims includes the limitation of "determining a relative amount of chroma in the initial primary color data values" or "determining a relative amount of chroma in the initial CMY data values"; for the reasons discussed above with regard to independent claim 1, the Examiner is respectively requested to withdraw the rejections asserted in the last Office Action.

CONCLUSION

For the reasons detailed above, it is submitted all remaining claims (Claims 1-13) are now in condition for allowance. The foregoing comments do not require unnecessary additional search or examination.

☒ Remaining Claims, as delineated below:

(1) FOR	(2) CLAIMS REMAINING AFTER AMENDMENT LESS HIGHEST NUMBER PREVIOUSLY PAID FOR		(3) NUMBER EXTRA
TOTAL CLAIMS	13	- 20 =	0
INDEPENDENT CLAIMS	4	- 4 =	0

☒ This is an authorization under 37 CFR 1.136(a)(3) to treat any concurrent or future reply, requiring a petition for extension of time, as incorporating a petition for the appropriate extension of time.
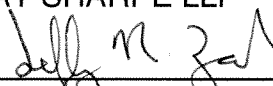
☒ The Commissioner is hereby authorized to charge a **One (1) Month Extension of Time** fee to a credit card.

☒ The Commissioner is hereby authorized to charge any other filing or prosecution fees which may be required, under 37 CFR 1.16, 1.17, and 1.21 (but not 1.18), or to credit any overpayment, to Deposit Account 24-0037.

In the event the Examiner considers personal contact advantageous to the disposition of this case, he/she is hereby authorized to call Jeffrey N. Zahn, at Telephone Number (216) 861-5582.

Respectfully submitted,

FAY SHARPE LLP

_____January 10, 2008_____
Date

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